

AMENDMENTS TO THE CLAIMS

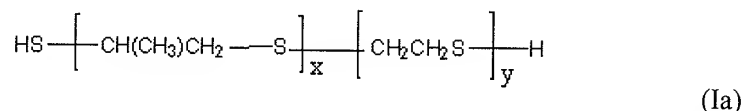
The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

- 1-21. (cancelled)
22. (previously presented) A transparent, non-elastomeric, polythiourethane/urea material comprising the reaction product of:
- (a) at least one (α , ω)-diiso(thio)cyanate polysulfide prepolymer, said prepolymer being free from disulfide (-S-S-) linkage; and
 - (b) at least one aromatic primary diamine, in an equivalent molar ratio amine function/iso(thio)cyanate function (NH_2/NCX , $\text{X}=\text{O}$, S) ranging from 0.5 to 2, said aromatic primary diamine being free from disulfide (-S-S-) linkage,
- wherein the (α , ω)-diiso(thio)cyanate polysulfide prepolymer is the reaction product of at least one cycloaliphatic or aromatic diiso(thio)cyanate and at least one (α , ω)-diol or dithiol prepolymer, said (α , ω)-diol or dithiol prepolymer being a polysulfide or a mixture of polysulfides.
23. (previously presented) The transparent, non elastomeric polythiourethane/urea material of claim 22, wherein the equivalent ratio NH_2/NCX ranges from 0.90 to 1.10.
24. (previously presented) The material of claim 22, wherein the equivalent ratio NH_2/NCX ranges from 0.93 to 0.95.
- 25-27. (cancelled)

28. (currently amended) The material of claim 22, wherein the polysulfide or mixture of polysulfides is selected from the group consisting of:

- ~~Prepolymers~~Polysulfides of formula:



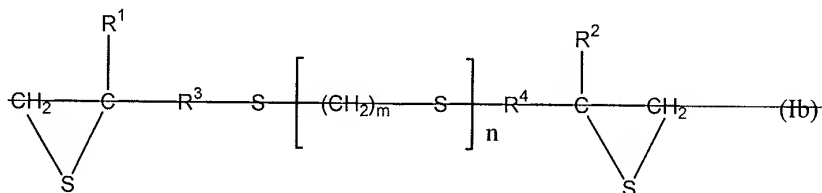
in which x and y are chosen such that the two following conditions are simultaneously satisfied:

-the polysulfide of formula Ia is a prepolymer; and

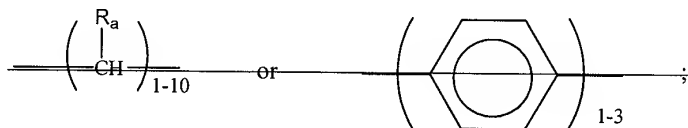
-the number average molecular weight of the prepolymer ranges from 100 to polysulfide of formula Ia is not more than 3000 gmol⁻¹; and

~~-the prepolymer is a polysulfide;~~

~~-Prepolymers resulting from the polymerization of diepisulfides of formula:~~



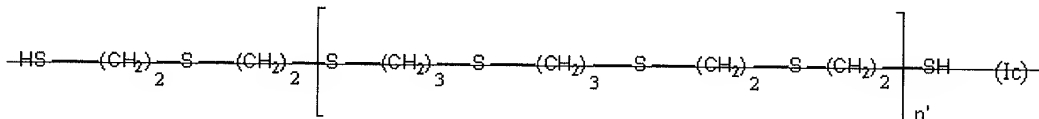
~~in which R¹ and R² are, independently from each other, H, alkyl, aryl, alkoxy, alkylthio or arylthio; R³ and R⁴ are, independently from each other,~~



~~R_a designates H, alkyl, aryl, alkoxy, aryloxy, alkylthio or arylthio and, n is an integer from 0 to 4 and m is an integer from 1 to 6,~~

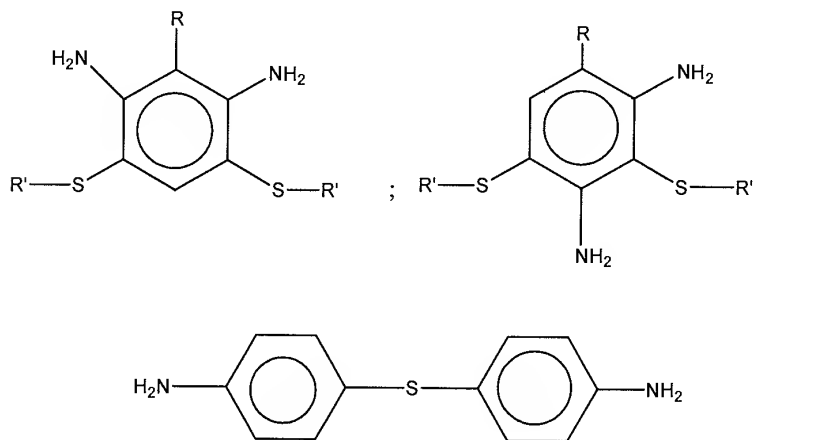
and

~~Prepolymers of formula:~~



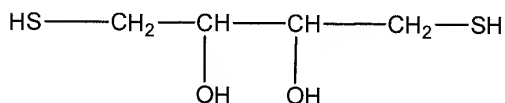
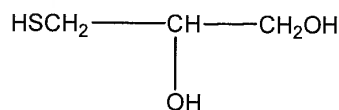
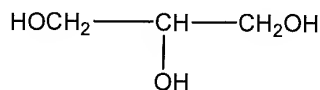
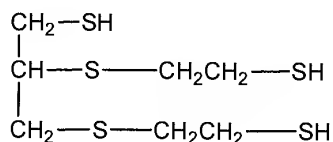
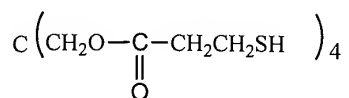
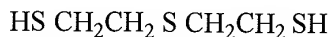
~~where n' is such that the number average molecular weight (\overline{M}_n) of the prepolymer ranges from 500 to 1500 g mol⁻¹.~~

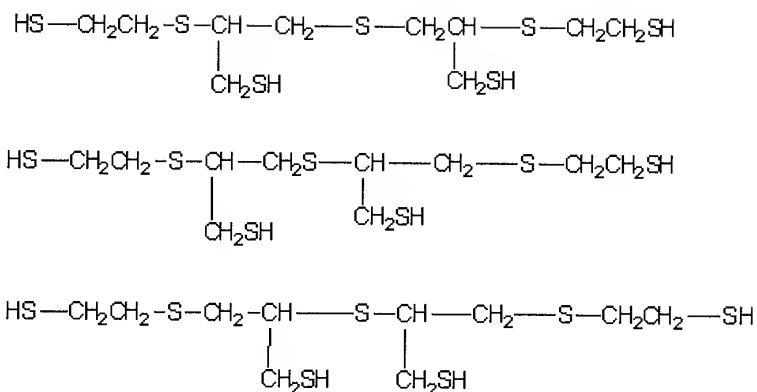
29. (previously presented) The material of claim 22, wherein the aromatic diamine contains at least one S atom in its molecule.
30. (previously presented) The material of claim 29 wherein the diamine is selected from



in which R is H or an alkyl group and R' is an alkyl group, and mixtures of the above diamines.

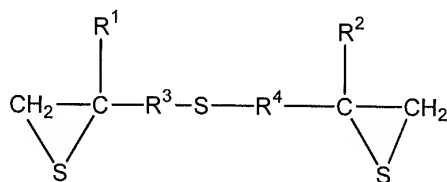
31. (previously presented) The material of claim 22, wherein the material is the reaction product of:
- a) said at least one (α , ω)-diiso(thio)cyanate polysulfide prepolymer;
 - b) said at least one aromatic primary diamine; and
 - c) at least one di-, tri-, or tetra alcohol, or at least one di-, tri-, or tetra thiol, or a mixture thereof.
32. (previously presented) The material of claim 31, wherein the alcohols and thiols are selected from the groups consisting of:





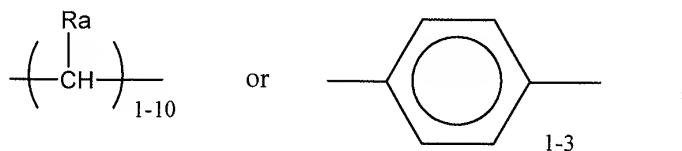
and mixtures thereof.

33. (previously presented) The material of claim 22 having a refractive index, n_D^{25} , higher than 1.53.
34. (previously presented) The material of claim 22 having a refractive index, n_D^{25} , of at least 1.55.
35. (previously presented) The material of claim 22 having a refractive index, n_D^{25} , of at least 1.57.
36. (previously presented) The material of claim 22, wherein the polysulfide is an hyperbranched polysulfide resulting from the polymerization of a diepisulfide of formula:



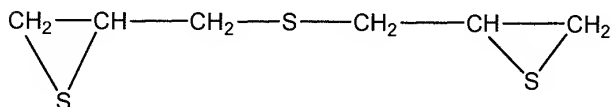
in which R^1 and R^2 are, independently from each other, H, alkyl, aryl, alkoxy, alkylthio or

arylthio, R^3 and R^4 are independently from each other,



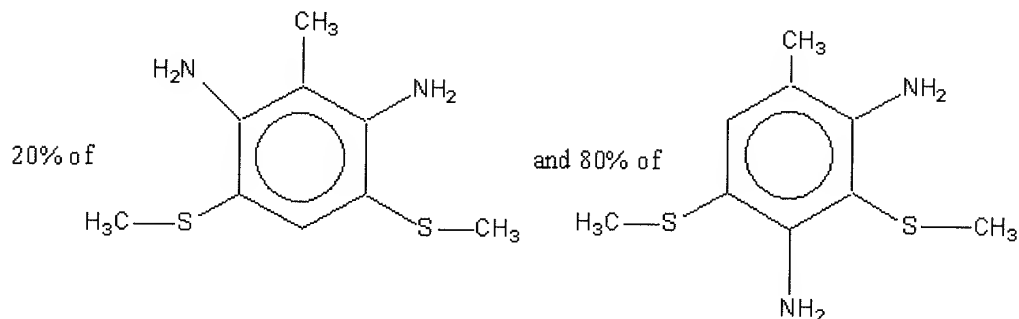
Ra designates H, alkyl, aryl, alkoxy, aryloxy, alkylthio or arylthio, with 2-mercaptoethyl sulfide (DMES).

37. (previously presented) The material of claim 36, wherein the diepisulfide has formula :



38. (previously presented) An optical article made from a material according to claim 22.
39. (currently amended) The material of claim [[28]] 48, wherein n' is such that the number average molecular weight (\overline{M}_n) of the prepolymer ranges from 650 to 1350 g mol⁻¹.
40. (previously presented) The material of claim 22, wherein the prepolymer is the reaction product of at least one (α , ω) dithiol prepolymer.
41. (cancelled)
42. (previously presented) The material of claim 30, wherein R and R' are CH₃.

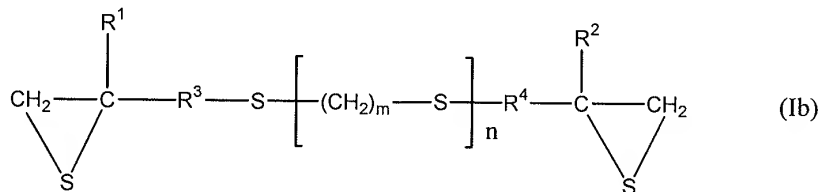
43. (previously presented) The material of claim 30, wherein the diamine is a mixture of by weight:



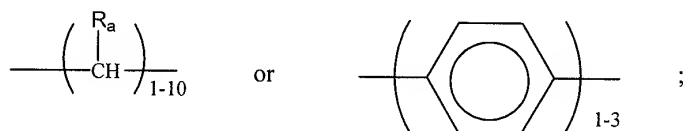
Claims 44-46 (cancelled)

47. (new) The material of claim 22, wherein the polysulfide or mixture of polysulfides is selected from the group consisting of:

-Prepolymers resulting from the polymerization of diepisulfides of formula:



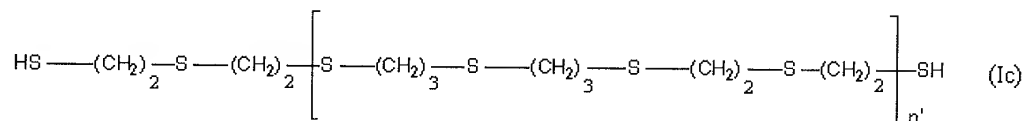
in which R^1 and R^2 are, independently from each other, H, alkyl, aryl, alkoxy, alkylthio or arylthio; R^3 and R^4 are, independently from each other,



R_a designates H, alkyl, aryl, alkoxy, aryloxy, alkylthio or arylthio and, n is an integer from 0 to 4 and m is an integer from 1 to 6.

48. (new) The material of claim 22, wherein the polysulfide or mixture of polysulfides is selected from the group consisting of:

-Prepolymers of formula:



where n' is such that the number average molecular weight (\overline{M}_n) of the prepolymer ranges from 500 to 1500 g mol⁻¹.

49. (new) The material of claim 22, wherein the at least one at least one (α,ω)-diiso(thio)cyanate polysulfide prepolymer has a number average molecular weight of not more than 3000 g mol⁻¹.